2

THE AUSTRALIAN WEEVIL GENUS *NYELLA*[1]

(Coleoptera: Curculionidae: Baridinae)

By ELWOOD C. ZIMMERMAN
Bishop Museum, Honolulu, Hawaii

Since Charles Oke described *Nyella* in 1931, it has remained an enigma. Oke placed it originally under the heading 'Incertae Sedis', and said that 'The position of this genus is doubtful, but the table of Le Conte and Horn, in the Classification of the Coleoptera of North America, indicates a grouping with the Trypetini'. In 1934, Oke reported upon a more detailed examination of the weevil, and he then transferred it to the Cryptorhynchinae. *Nyella* is listed in the Trypetini of the Cossoninae in *Coleopterorum Catalogus*, pars 149: 108, 1936. *Nyella* does not belong to the Trypetini or to the Cryptorhynchinae. Oke either misinterpreted the characters of *Nyella* or he misread the Le Conte and Horn key, because in that key one is led straight to the Baridinae where *Nyella* belongs. It is unfortunate that Oke did not submit a specimen to a specialist on the Curculionidae who could have assisted him in assigning the weevil to its correct subfamily. I have been interested in ascertaining the taxonomic position of *Nyella* for a long time, because I have been working on the genera of the Indo-Pacific Baridinae. I had tentatively concluded from a study of Oke's illustrations that *Nyella* belongs to the Baridinae, but I was unable to confirm that opinion until I was able to study a specimen. Oke's description is inadequate and it is in part erroneous.

It was thought that only a type pair of the weevil, mounted on a single card, was in the National Museum of Victoria at Melbourne and not available for loan. Recently, however, Mr A. Neboiss, Curator of Insects of that institution, searched through Oke's collection and found the unlabelled, partly dismembered third specimen that Oke mentioned in his 1934 report, and the specimen has been loaned to me for study. I am now able to present the results of my examination as follows:

Subfamily BARIDINAE

Genus **Nyella** Oke

Nyella Oke, *Proc. Roy. Soc. Victoria* 43: 200, fig. 6g, h, i, 1931. Same journal 46: 262, 1934, expanded description.

Nyella bears some resemblance to such genera of squamose Baridinae as *Lophobaris* Marshall. It may be characterized as follows (from the single damaged male I have seen):

Body and legs densely squamose. *Head* and rostrum with dorsal contour slightly discontinuous (but appearing more abruptly discontinuous on type because of erect squamae on base of rostrum and interocular area and prostrate squamae on head); ventral margins of eyes extending a little ventrad of ventral origin of rostrum. *Rostrum* (described from a male) comparatively stout, gently arcuate, its length (measured along the ventral chord from apex of mandibles to base) less than

[1] This is number 17 of a series of publications resulting from studies made possible by National Science Foundation Grant G-18933.


1
2
3
4

three-fourths as long as pronotum; basal interocular distance, as seen in direct frontal view, much greater than breadth of an eye; broader distad of antennal insertions; mandibles strongly bidentate and normally decussate; scrobes with their apices visible in dorsal view, thence passing from dorsal view caudad beneath sides of rostrum, the caudal ends of their dorsal margins directed to about the ventral one-third of the eyes and their apices widely separated on underside of rostrum. *Antennae* (in male) inserted very near middle of rostrum (as measured along ventral margin); scape subequal in length to the seven funicular segments combined, its apex reaching base of rostrum and almost touching eye; funicle with first segment (measured along its greatest length) as long as segments two, three and four combined; club ovoid, about as long as funicular segments three to seven combined, its first segment moderately setose. *Prothorax* with feeble postocular lobes; pronotum strongly transverse (about 4·0 : 6·5 on type-species), broadest at base, basal margin strongly sinuous. *Scutellum* unusual, small, deeply immersed and mostly hidden. *Elytra* broad, broadest near posterior parts of the prominent humeri; basal margin strongly sinuous and with the scutellar emargination deep; striae one, seven and eight not reaching base, stria 10 distinct above most of metepisternum and caudad but not above ventrites one and two. *Legs* with trochanters lacking, long, slender, differentiated sensory setae; femora moderate, the posterior pair not reaching elytral apex, denticulate beneath at about middle and moderately impressed from the largest tooth to apex for reception of basal parts of tibiae; tibial uncus well developed, mucro small (metatibiae wanting from specimen studied); tarsi with segment one (excluding basal bulbose part) subtriangular, longer than two which is transverse, segment three much broader than two and deeply bilobed, the claw segment extending beyond apex of two and its claws strong and moderately divergent. *Prosternum* with anterior margin deeply emarginate; subapical constriction strongly marked; broadly, shallowly, medially canaliculate with vestiges of side walls to the canal cephalad of coxae; area cephalad of coxae shorter than length of a coxa and about twice as long as area caudad of coxa; procoxal separation subequal to transverse diameter of a procoxa; the poststernellum widens strongly to behind procoxae and there it has raised lateral margins and is about twice as broad as the narrowest intercoxal distance (but it does not extend caudad of prothoracic margin), it abuts the intercoxal process of metasternum and its longitudinal contour is discontinuous with that of metasternum. *Mesosternum* normally concealed from view excepting a small tubercle-like lobe of the mesosternellum at each side of the anterior margin of metasternum adjacent to mesocoxae; mesosternellum completely vertical and the suture between it and metasternum normally entirely concealed, except at lateral lobes, except when prothorax is disengaged, and then the suture can be distinguished on the vertical wall combining the mesosternellum and anterior margin of the metasternum; mesocoxae widely separated, distance between them about twice the breadth of a coxa and twice as widely separated as procoxae; mesopleura broad, suture between them vestigial. *Metasternum* transverse, median length subequal to that of ventrite one; cephalic margin straight; metacoxal separation subequal to length of mesocoxa; metepisternum broad. *Abdomen* broad; intercoxal process of ventrite one gently arcuate; suture between ventrites one and two obsolete in middle; ventrite one a little longer than ventrites two and three combined along median line; ventrite two longer than three plus four which combined are somewhat longer than five (the male has a distinct median process on caudal margin of five); pygidium concealed

from view from directly above but its apical part vertical, strongly transverse and distinctly exposed to view from behind or below.

TYPE SPECIES: *Nyella tuberculata* Oke, by monotypy and original designation (Pl. 5 and Fig. 1-4).

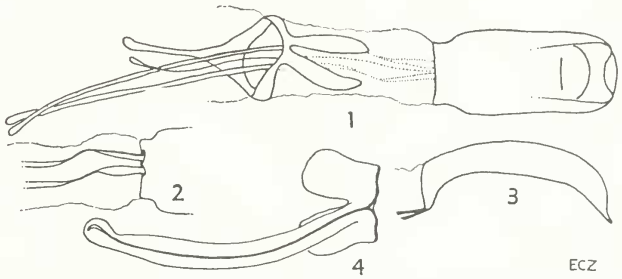

FIG. 1-4—Details of a male *Nyella tuberculata* Oke: 1, dorsal view of aedeagus and associated structures; 2, ventral view of base of aedeagus to show attachment of apodemes; 3, lateral view of aedeagus; 4, ninth sternite ('urosternite', 'spiculum gastrale'). All drawings to the same scale.

Our ignorance of the Australian and Indo-Pacific Baridinae is so great that it is of little use to attempt to discuss at this time the relationships and place of *Nyella* in the Australian fauna. It is probable that several hundred Australian Baridinae exist, but evidently less than 75 species have been described in about 10 genera. More than one-half of the described Australian Baridinae have been placed in *'Baris'* where perhaps few of them belong. Most of the species were described by Lea, and the entire Australian barid fauna is in great need of revision.

Nyella tuberculata is an unusual barid, and one might not recognize it as a barid at first sight in dorsal view. The densely squamose, fasciculate dorsum and its broad form recall some of the species of *Oroclesis* in the Cryptorhynchinae or perhaps some Erirhininae such as *Storeus*. The nature of the scutellum and mesosternum are noteworthy features. Oke described the dorsum as tuberculate, but it is really fasciculate with low swellings beneath the large fascicles on elytral intervals three, five and seven. The fascicles contain elongate, erect yellow and black squamae, and not only black squamae as originally described. The crown of the head is densely clothed with prostrate, ovate, stramineus squamae that are more elongate distad, and the interocular area and base of the rostrum have erect, elongate-ovate squamae. The rostrum otherwise is without squamae. The dorsum of the rostrum in the male behind the antennae is comparatively coarsely punctate with the punctures tending to be longitudinally subconfluent, but there are no carinae. The pronotum is strongly transverse with the breadth: length proportion as 65 : 40; most of the elongate-ovate squamae are prostrate and stramineus to golden yellow, laterad they are more imbricated, and there is a large, conspicuous, submedian fascicle of erect squamae, a suberect cluster of squamae on either side of the apex and another near the middle of each side margin of the pronotum. The placement of most of the fascicles on elytral intervals three, five and seven can be seen on the photographs, but there is a small cluster of erect squamae basad of the large fascicle on each third interval that is largely obscured in the photographs. The elytral intervals have the derm coarsely reticulate, do not bear setae, and, excepting for the erect squamae in the clusters and fascicles, most of the squamae are elongate-ovate, imbricated so as to conceal most of the derm and stramineus to golden yellow. The strial punctures are small, and each bears a narrow, prostrate, sub-